AMENDMENTS TO THE CLAIMS

1-84. (Canceled)

85. (Previously Presented)   A computer system for processing sensor data from a continuous glucose sensor, the computer system comprising:

> a sensor data receiving module configured to receive sensor data from a continuous glucose sensor , wherein the sensor data comprises one or more sensor data points;

> a reference data receiving module configured to receive reference data , wherein the reference data comprises one or more reference data points;

> a data matching module configured to form one or more matched data pairs by matching reference data to substantially time corresponding sensor data; and

> a stability determination module configured to determine a stability of the continuous glucose sensor , wherein the stability determination module is configured to evaluate a sensitivity associated with the continuous glucose sensor.

86. (Previously Presented)   The computer system of claim 85, wherein the stability determination module is further configured to evaluate at least one of pH, oxygen, hypochlorite, interfering species, correlation of matched pairs, R-value, baseline drift, baseline offset, amplitude, or combinations thereof.

87. (Previously Presented)   The computer system of claim 85, further comprising an interface control module configured to provide output based at least in part on the stability of the continuous glucose sensor.

88. (Previously Presented)   The computer system of claim 87, wherein the output from the interface control module comprises at least one of a numeric estimated glucose value, an indication of directional trend of glucose concentration, a graphical representation of an estimated glucose value, or combinations thereof.

89. (Previously Presented)   The computer system of claim 85, wherein the reference data receiving module is configured to receive sensor data from a blood glucose test.

90. (Previously Presented)   The computer system of claim 85, wherein the reference data receiving module is configured to receive reference data from an internal reference glucose monitor that is housed integrally with the computer system.

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91.   (Previously Presented)   A method for processing sensor data from a continuous glucose sensor, the method comprising:

receiving sensor data from a continuous glucose sensor, wherein the sensor data comprises one or more sensor data points;

forming one or more matched data pairs by matching reference data to substantially time corresponding sensor data; determining using processing circuitry a stability of the continuous glucose sensor at least in part by evaluating a sensitivity associated with the continuous glucose sensor; and

providing output reflective of the sensor data after a predetermined level of stability has been determined.

92.   (Previously Presented)   The method of claim 91, wherein determining a stability of the continuous glucose sensor further comprises waiting a predetermined time period of from about one minute to about six weeks after implantation of the continuous glucose sensor in a host before determining a stability associated with the continuous glucose sensor.

93.   (Canceled)

94.   (Previously Presented)   The method of claim 91, wherein determining a stability of the continuous glucose sensor further comprises evaluating at least one of pH, oxygen, hypochlorite, interfering species R-value, baseline drift, baseline offset, , or combinations thereof.

95.   (Previously Presented)   The method of claim 91, wherein providing output comprises providing at least one of an audible output, visual output, tactile output, or combinations thereof .

96.   (Previously Presented)   The method of claim 95, wherein providing output comprises indicating at least one of a numeric estimated glucose value, a directional trend of glucose concentration, a graphical representation of an estimated glucose value, or combinations thereof.

97.   (Previously Presented)   The method of claim 91, further comprising receiving reference data from a reference glucose monitor.

98.   (Previously Presented)   The method of claim 97, wherein receiving reference data from a reference glucose monitor comprises receiving a wired internal communication.

99. (Previously Presented) A system for processing sensor data from a continuous glucose sensor, comprising:

a sensor data module operably linked to a continuous glucose sensor and configured to receive sensor data from the continuous glucose sensor, wherein the sensor data comprises one or more sensor data points; and

a processor module associated with the sensor data module and programmed to match one or more reference data points with one or more substantially time corresponding sensor data points to form a calibration set comprising at least one matched data pair, wherein the processor module is programmed to evaluate a stability of the continuous glucose sensor at least in part by evaluating a sensitivity associated with the continuous glucose sensor, and wherein the processor module is further programmed to output information reflective of the sensor data after a predetermined level of stability has been determined.

100. (Previously Presented) The system of claim 99, wherein the predetermined level of stability is based at least in part on a time period after the continuous glucose sensor was implanted.

101. (Previously Presented) The system of claim 99, wherein the processor module is further programmed to evaluate at least one of pH, oxygen, hypochlorite, interfering species, correlation of matched pairs, R-value, baseline drift, baseline offset, amplitude, or combinations thereof.

102. (Previously Presented) The system of claim 99, further comprising an output module associated with the processor module and programmed to control output of the sensor data.

103. (Previously Presented) The system of claim 102, wherein the output of sensor data indicates at least one of a numeric estimated glucose value, a directional trend of glucose concentration, a graphical representation of an estimated glucose value, or combinations thereof.

104. (Previously Presented) The system of claim 99, further comprising a reference input module configured to receive reference data from a blood glucose test, wherein the reference data comprises one or more reference data points.

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105. (Previously Presented)   The system of claim 99, further comprising a reference glucose monitor integral with the system and wherein the system further comprises a reference input module configured to receive an internal communication from the reference glucose monitor, wherein the internal communication comprises one or more reference data points.

106-175.   (Canceled)

176. (Previously Presented)   The computer system of claim 85, wherein the stability determination module is configured to evaluate at least one of an amplitude or a variability of the sensitivity.

177. (Canceled)

178. (Previously Presented)   The computer system of claim 85, further comprising an interface control module comprising alerts configured to warn a user of a present and/or upcoming hypoglycemic and/or hyperglycemic event.

179. (Previously Presented)   The computer system of claim 85, further comprising a processor module configured to predict one or more glucose values at one or more future points in time.

180. (Previously Presented)   The computer system of claim 85, further comprising an interface control module configured to send the sensor data to an insulin pump.

181. (Previously Presented)   The computer system of claim 180, wherein the interface control module is configured to send the sensor data to the insulin pump only when a stability determination module determines a predetermined level of stability of the continuous sensor.

182. (Canceled)

183. (Previously Presented)   The method of claim 91, wherein determining a stability of the continuous glucose sensor comprises evaluating at least one of an amplitude or a variability of the sensitivity.

184. (Canceled)

185. (Previously Presented)   The method of claim 91, wherein providing output comprises alerting a user of a present and/or upcoming hypoglycemic and/or hyperglycemic event.

186. (Previously Presented)   The method of claim 91, further comprising predicting one or more glucose values at one or more future points in time.

187. (Previously Presented)   The method of claim 91, wherein providing output comprises sending the sensor data to an insulin pump.

188. (Previously Presented)   The method of claim 187, wherein providing output comprises sending the sensor data to the insulin pump only when the predetermined level of stability of the continuous sensor is determined.

189. (Canceled)

190. (Previously Presented)   The system of claim 99, wherein the processor module is programmed to evaluate at least one of an amplitude or a variability of the sensitivity.

191. (Canceled)

192. (Previously Presented)   The system of claim 99, further comprising an output module comprising alerts configured to warn a user of a present and/or upcoming hypoglycemic and/or hyperglycemic event.

193. (Previously Presented)   The system of claim 99, wherein the processor module is configured to predict one or more glucose values at one or more future points in time.

194. (Previously Presented)   The system of claim 99, further comprising an output module configured to send the sensor data to an insulin pump.

195. (Previously Presented)   The system of claim 194, wherein the output module is configured to send the sensor data to the insulin pump only when the predetermined level of stability of the continuous sensor is determined.

196-238. (Canceled)

239. (Previously Presented)   A continuous glucose sensor system, comprising:

a continuous glucose sensor configured to continuously measure a concentration of glucose in a host; and

a computer system configured to receive sensor data associated with the concentration of glucose in the host and configured to process the sensor data to provide displayable sensor data, wherein the computer system is configured to output the sensor data after a predetermined level of stability of the continuous glucose sensor has been

determined at least in part by evaluating a sensitivity associated with the continuous glucose sensor.

240.   (Previously Presented)   The system of claim 239, wherein the computer system is configured output the sensor data to a display after the predetermined level of stability of the continuous glucose sensor has been determined.

241.   (Previously Presented)   The system of claim 239, wherein the computer system is configured output the sensor data to an insulin pump after the predetermined level of stability of the continuous glucose sensor has been determined.

242.   (Previously Presented)   The system of claim 239, wherein the computer system is configured output alerts configured to warn a user of a present and/or upcoming hypoglycemic and/or hyperglycemic event after the predetermined level of stability of the continuous glucose sensor has been determined.

243-247.   (Canceled)